Service
Service
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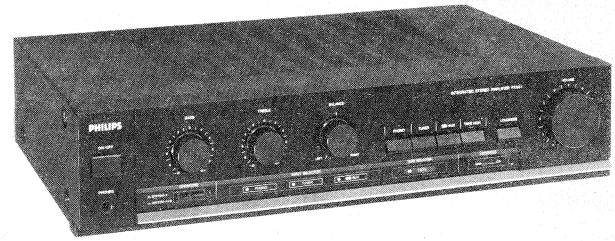

40 049A

Service Manual

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(GB)
Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

(F)
Les normes de sécurité exigent que l'appareil soit remis à l'état d'orgine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

(NL)
Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

(D)
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden für Reparaturen sind Original-Ersatzteile zu verwenden.

(I)
Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni orignali e che siano utilizzati pezzi di ricambiago identici a quelli sepecificati.

Documentation Technique Service Dokumentation Documentazione di Servizio Huolte-Ohje Manual de Servicio Manual de Serviço

PHILIPS

"Pour votre sécurité, ces documents soivent être utilisés par des spécialistes agrées, seuls habilités à réparer votre appareil en panne".

Subject to modification
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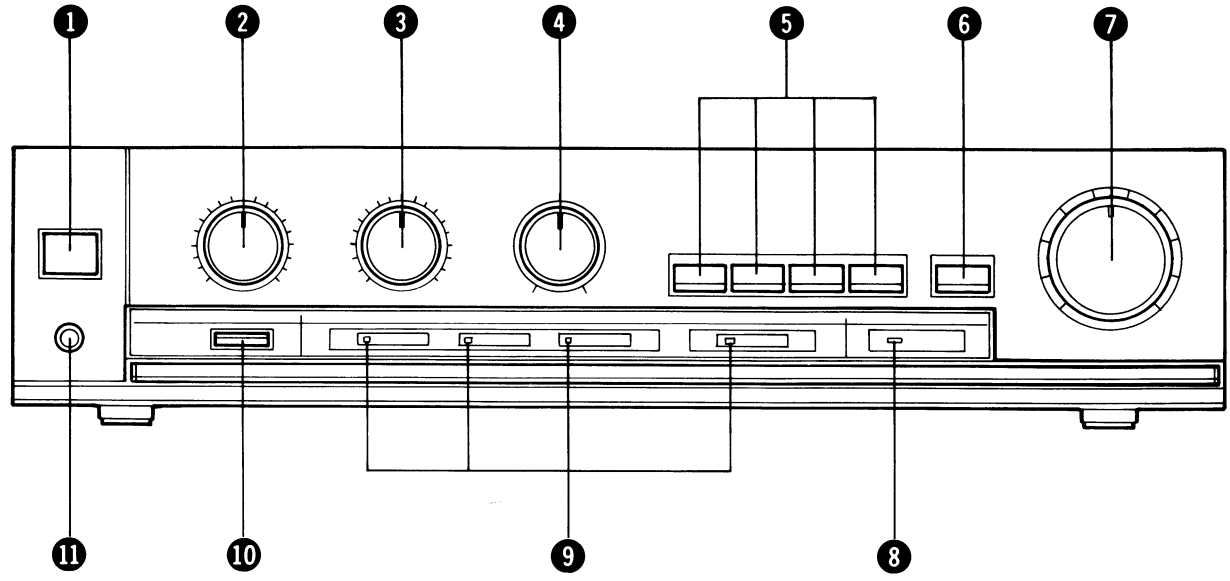
PHILIPS
Published by Consumer Electronics

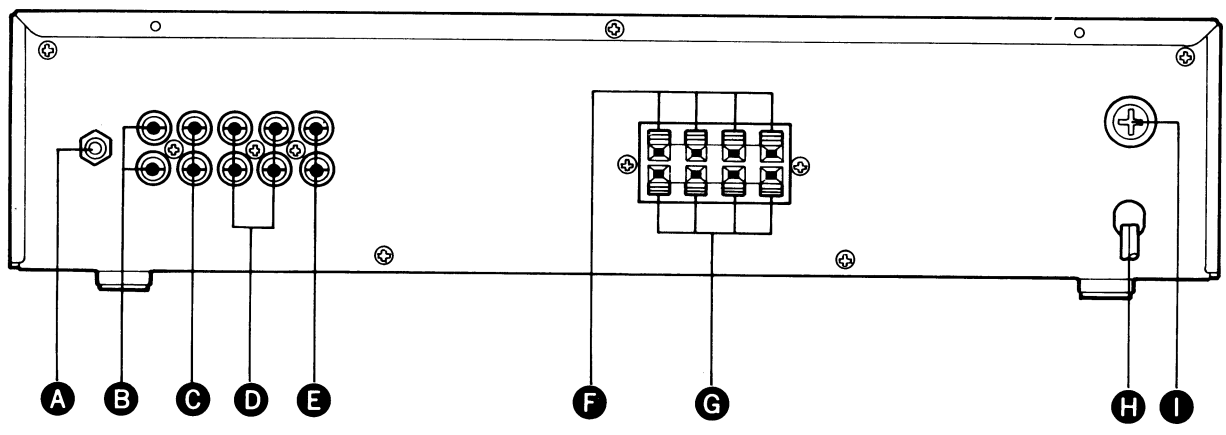
CS 3 573

SPECIFICATION	Nominal value	Typical value
General		
Mains voltage	: 220V ~ (/00R) : 240V ~ (/05R)	: 220V ~ (/00R) : 240V ~ (/05R)
Mains frequency	: 50 – 60 Hz	: 50 – 60 Hz
Power consumption	: 145W max	: 25 – 145W
Dimensions (WxHxD)	: 420 x 90 x 260 mm	: 420 x 90/96 x 260 mm
Weight	: 3.9 kg	: 3.9 kg
Amplifier		
Output power	: 28W in 8Ω (IEC)	: 28W in 8Ω (IEC)
Distortion		
T.H.D.	: ⩽ 0.3% at 1 kHz : ⩽ 0.3% at 63 Hz–12.5 kHz (IEC)	: ⩽ 0.1% at 1 kHz : ⩽ 0.3% at 63 Hz–12.5 kHz (IEC)
Intermodulation	: ⩽ 0.3% at 60/7000 Hz 4:1	: ⩽ 0.1% at 60/7000 Hz 4:1
Frequency characteristic		
Phono input (tone control)	: from 20 Hz – 20 kHz ±2 dB (IEC)	: from 20 Hz – 20 kHz ±1 dB (IEC)
Other inputs (neutral)	: from 20 Hz – 20 kHz ±2 dB	: from 10 Hz – 25 kHz ±2 dB
Bass control	: at 100 Hz +10 dB to –10 dB ±2 dB	: at 100 Hz +10 dB to –10 dB
Treble control	: at 10 kHz +10 dB to –10 dB ±2 dB	: at 10 kHz +10 dB to –10 dB
Loudness	: at 100 Hz +6 dB ±3 dB (Tap position) : at 10 kHz +4 dB ±2 dB (Tap position)	: at 100 Hz +6 dB (Tap position) : at 10 kHz +3 dB (Tap position)
Signal/noise ratio weighted (A-curve)		
Phono input	: for 28W output ⩾ 75 dB (IEC)	: for 28W output ⩾ 75 dB (IEC)
Other inputs	: for 28W output ⩾ 90 dB (IEC)	: for 28W output ⩾ 90 dB (IEC)
Channel separation	: at 1000 Hz ⩾ 45 dB : at 250 Hz – 10 kHz ⩾ 35 dB	: at 1000 Hz ⩾ 60 dB : at 250 Hz – 10 kHz ⩾ 40 dB
Input sensitivity		
Phono	: 2.5 mV at 47 kΩ	: 2.5 mV at 47 kΩ
Tuner	: 150 mV at 24 kΩ	: 150 mV at 25 kΩ
Tape	: 150 mV at 24 kΩ	: 150 mV at 25 kΩ
CD/AUX	: 150 mV at 24 kΩ	: 150 mV at 25 kΩ
Outputs		
Tape	: 350 mV at 1 kΩ (Phono 7.75 mV 1 kHz input)	: 150 mV

Caution ⚡ 220V/240V

Removal of upper cabinet and recordplayer exposes the protruding current-carrying parts of mains switch and mains transformer, therefore extreme care should be taken when the apparatus is connected to the mains.





CONNECTIONS AND CONTROLS

1	Mains switch	S001	A	Ground terminal	J031
2	Bass control	RE15	B	Phono input	JS06
3	Treble control	RE16	C	CD/Aux input	
4	Balance control	RE52	D	Tape input/output	JS07
5	Function switch	SS01	E	Tuner input	
6	Loudness switch		F	LS output A	J704
7	Volume control	RG01	G	LS output B	
8	Loudness indicator	DL55	H	Mains cord	W001
9	Function indicator	DL51~DL54	I	Fuse holder	J001
10	LS switch	SW01			
11	Headphone socket	JS01			

Idling Current

SK... SWITCH	SIGNAL	TO	VOLUME	ADJUST	OSCILLOSCOPE	D.C. METER INDICATOR
			Min.	Lch RB02(L)		Lch TP1(+), TP3(−) DC 4 mV (20 mA)
				Rch RB02(R)		Rch TP2(+), TP4(−) DC 4 mV (20 mA)

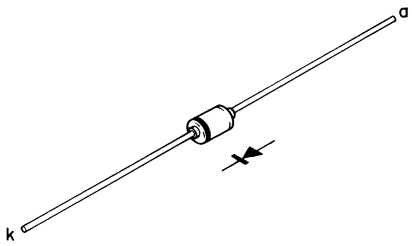
▲	Carbon film 0.125 W or 0.2 W	70°C	5%
□	Carbon film 0.25 W or 0.33 W	70°C	5%
■	Metal film 0.25 W or 0.33 W	70°C	5%
●	Carbon film 0.5 W	70°C	5%
	Carbon film 0.67 W	70°C	5%
	Carbon film 1 W or 1.15 W	70°C	5%

Ⓒ Chip component

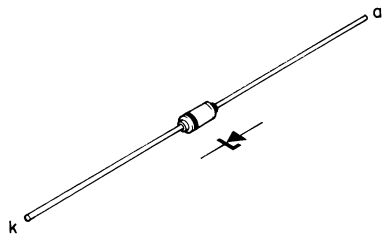
△△*	Ceramic plate Tuning ⩽ 120 pF NP.0 Others	2% −20/+80%
●●*	Polyester flat foil	10%
□*	Metalized polyester flat film	10%
○□*	Polyester flat foil small size (Mylar)	10%
○△*	Polysterene film/foil	1%
■▲*	Tubular ceramic	
○*	Miniature single	
○○*	Subminiature tantalum	± 20%

*a = 2.5 V
b = 3.15 V or 4 V
c = 6.3 V
d = 10 V
e = 16 V
f = 25 V
g = 40 V
h = 63 V
j = 100 V
l = 125 V
m = 150 V
n = 160 V
q = 200 V
r = 250 V
s = 300 V
t = 350 V
u = 400 V
v = 500 V
w = 630 V
x = 1000 V
A = 1.6 V
B = 6 V
C = 12 V
D = 15 V
E = 20 V
F = 35 V
G = 50 V
H = 75 V
I = 80 V

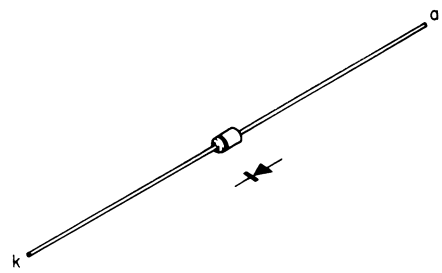
Semiconductor Layout



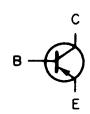
1SR35-200A



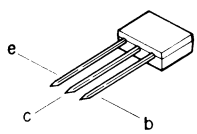
MA1150M

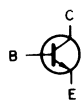


1S1555 DS448
1S2473 MA150
1S2076



2SA933SP





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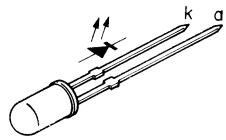
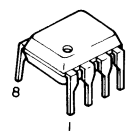


GL-5HD10



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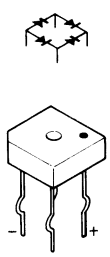
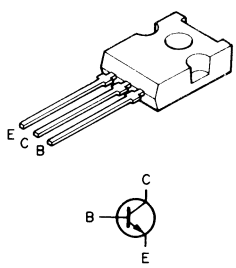


S4VB



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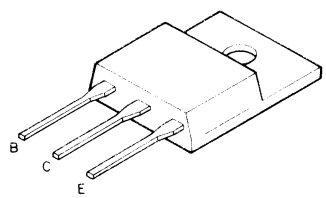
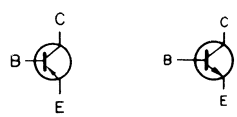
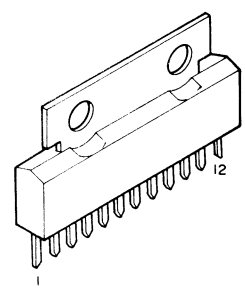




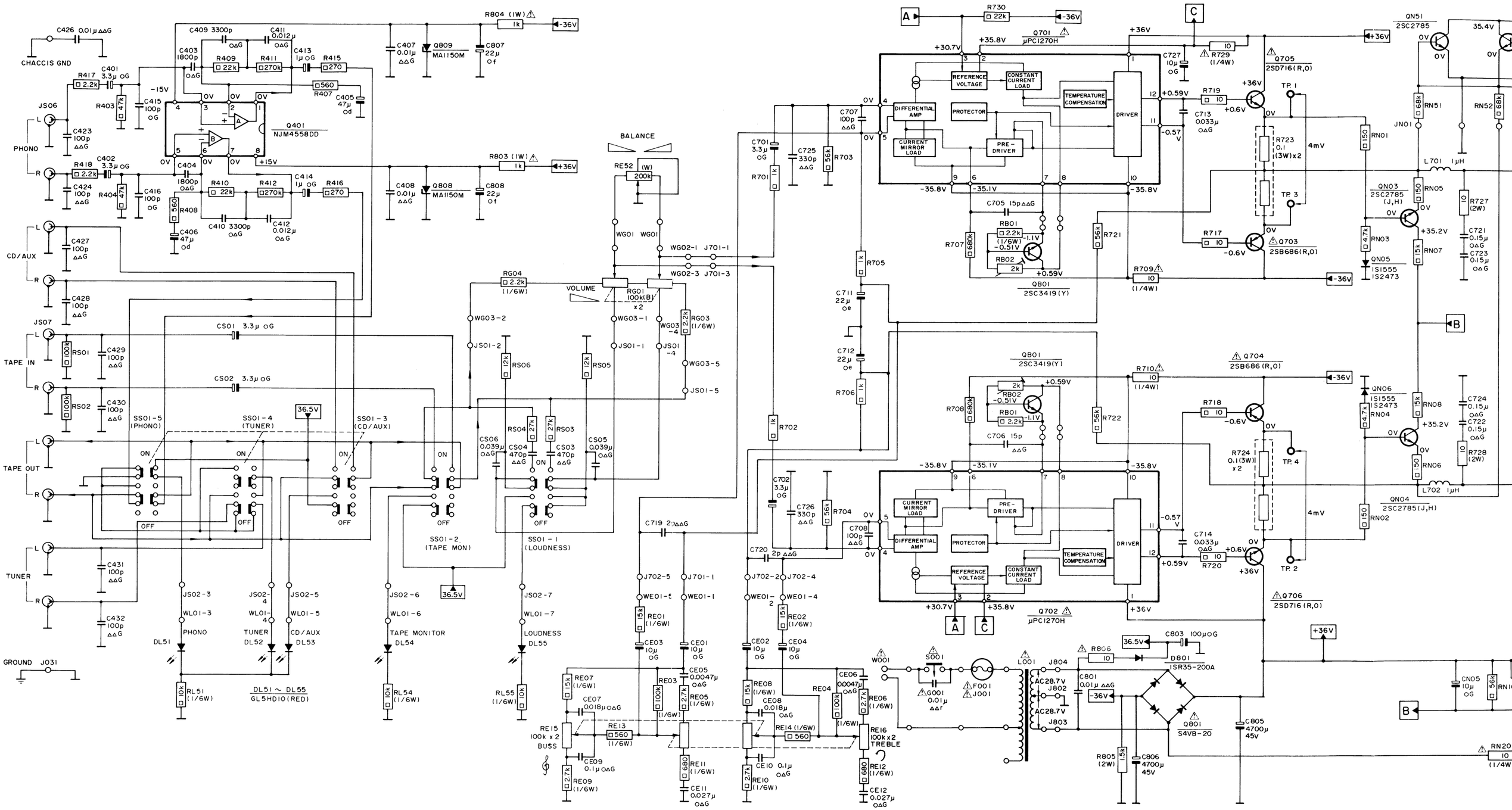
2SB686 2SD716



μPC1270H

SCHEMATIC DIAGRAM

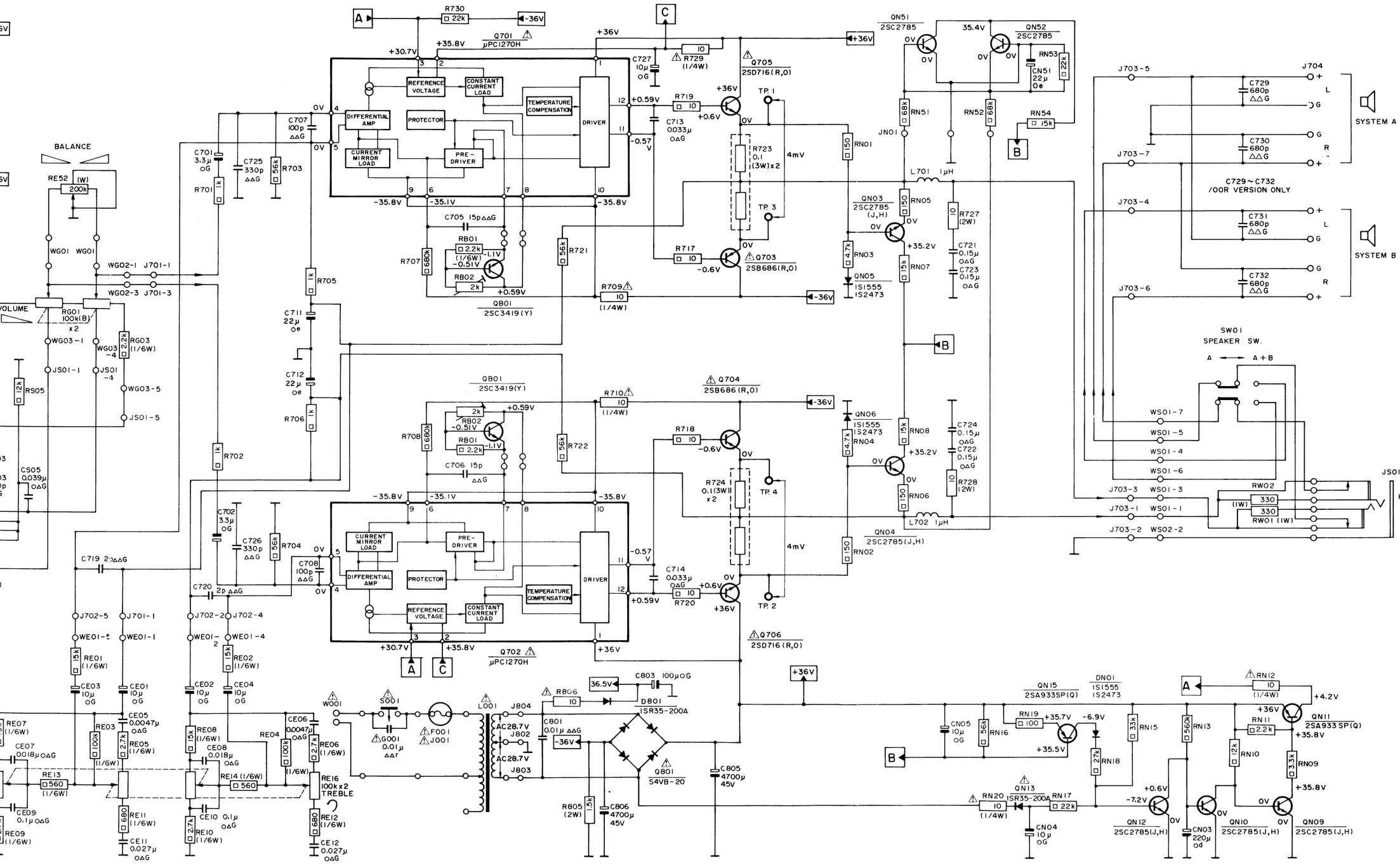
R	R417 R418 R403 R404 R408 ~ R412 R415 R416 R407 RG04 R804 R803 RE52 RG01 RG03 R703 R705 R707 R730 RB01 RB02 R721 R722 R709 R710 R717 R729 R719 R723 RN01 RN03 RN51 RN05 R
	RS01 RS02 RL51 RL54 RS06 RL55 RS04 RS03 RE09 RE07 RS05 RE13 RE01 RE03 RE11 RE05 RE15 RE16 RE10 RE08 R702 RE14 RE02 RE04 R704 R706 RE06 RE12 R708 R806 R805 R718 R720 R724 RN04 RN02 RN08 RN06
C – G	C426 C427 ~ C430 C423 C424 C401 C402 C403 C404 C406 C409 ~ C412 C413 C414 C407 C408 C807 C808 C701 C725 C707 C711 C706 C705 C727 C713
	C431 C432 C415 C416 CS01 CS02 C405 CS06 CS04 CS03 CS05 C719 CE01 ~ CE04 CE05 ~ CE12 C702 C726 C708 C712 G001 C801 C806 C803 C714 C805
Q – D	DL51 Q401 DL52 DL53 DL54 Q808 Q809 DL55 Q701 Q702 QB01 D801 Q801 Q703 ~ Q706 QN05 QN06 QN03 QN04 QN51
L – S – F	SS01 – 5 SS01 – 4 SS01 – 3 SS01 – 2 SS01 – 1 S001 F001 L001 L701 L702



CS 3 576

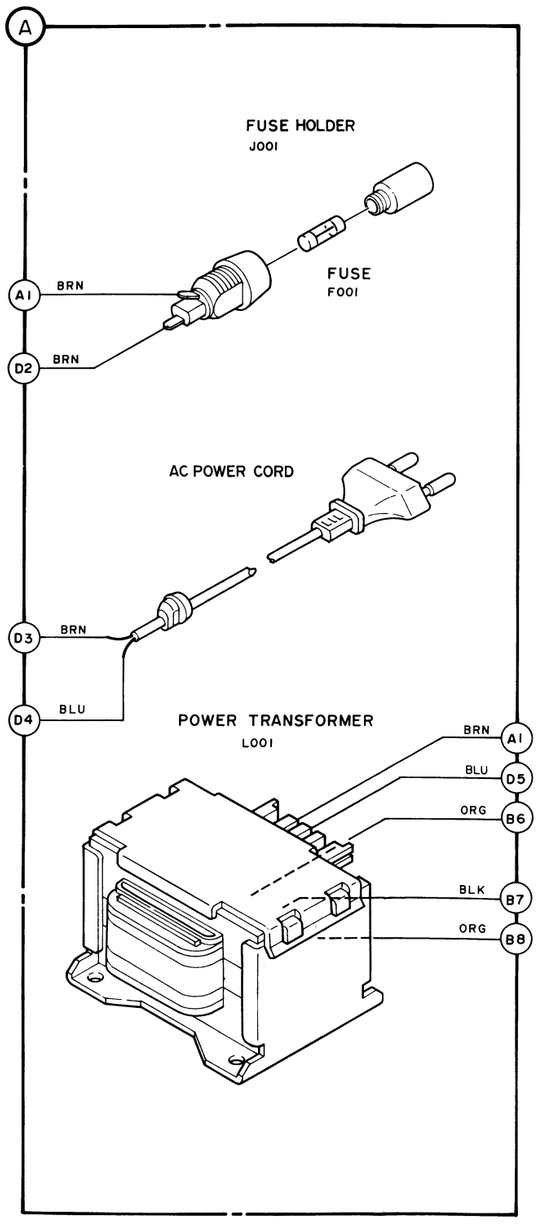
SCHEMATIC DIAGRAM

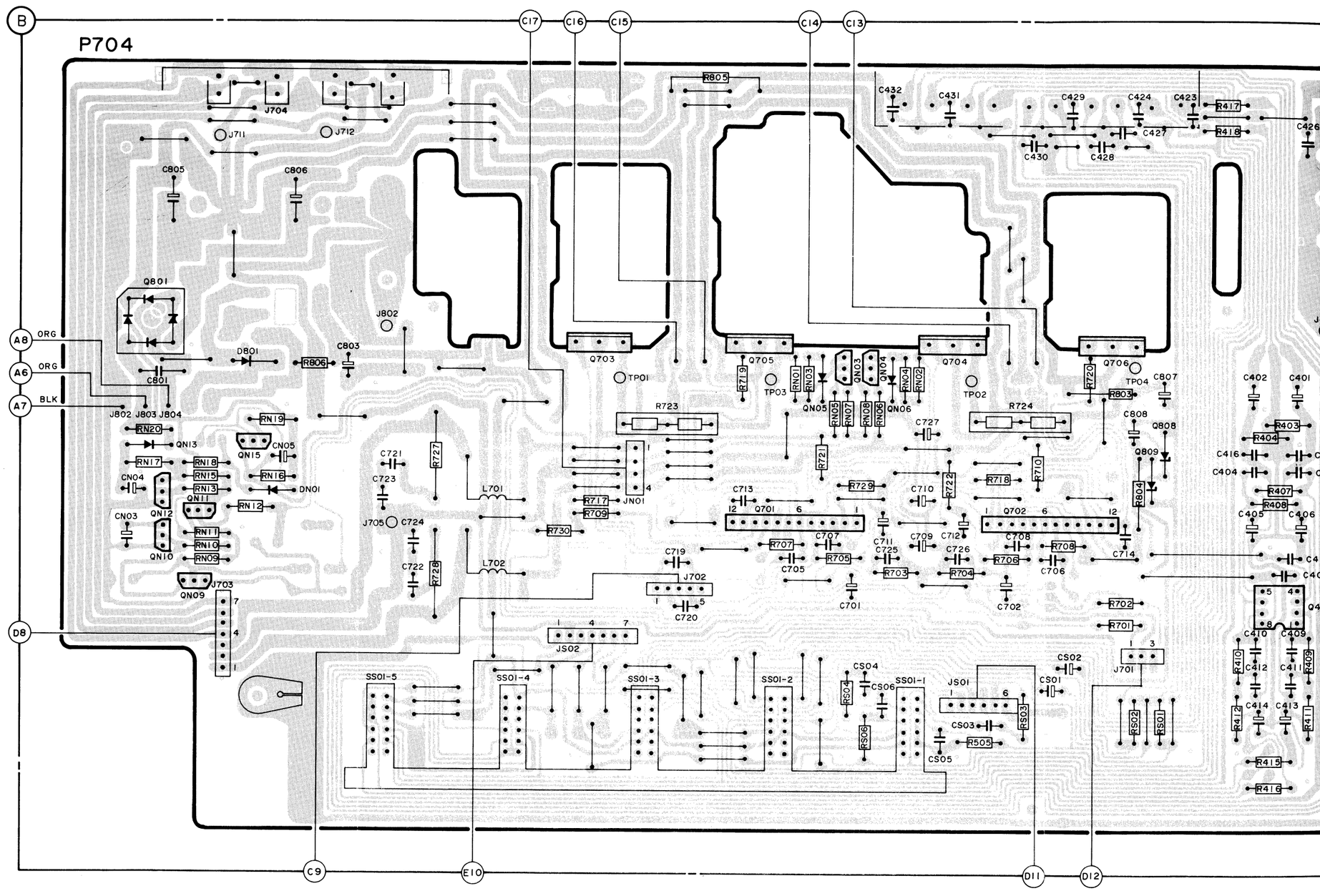
3 RE52 RG01 RG03 R703 R705 R707 R730 RB01 RB02 R721 R722 R709 R710 R717 R729 R719 R723 RN01 RN03 RN51 RN05 RN07 R727 RN52 RN54 RN53 RW01 RW02		R
RS03 RE09 RE07 RS05 RE13 RE01 RE03 RE11 RE05 RE15 RE16 RE10 RE08 R702 RE14 RE02 RE04 R704 R706 RE06 RE12 R708 R806 R805 R718 R720 R724 RN04 RN02 RN08 RN06 R728 RN20 RN16 RN19 RN17 RN18 RN15 RN09 ~ RN13		
08 C701 C725 C707 C711 C706 C705 C727 C713 C721 ~ C724 CN51 C729 ~ C730		C – G
CS04 CS03 CS05 C719 CE01 ~ CE04 CE05 ~ CE12 C702 C726 C708 C712 G001 C801 C806 C803 C714 C805 CN05 CN04 CN03		
Q701 Q702 QB01 D801 Q801 Q703 ~ Q706 QN05 QN06 QN03 QN04 QN51 QN52 QN13 QN15 DN01 QN12 QN10 QN11 QN09		Q – D
S001 F001 L001 L701 L702 SW01		L – S – F



WIRING DIAGRAM

R – G	R806 R727 R728 R717 R723 R805 R707 R705 R721 R729 R703 R722 R704 R718 R706 R710 R708 R701 R702 R720 R803 R804 R417 R418 R415 R
	RN09∿ RN13 RN15∿ RN20 R730 R709 R719 RN01∿ RN08 RS04 RS06 R505 RS03 R724 RS02 RS01 R701 R702 R409∿ R412 R4
C	C805 C801 C806 C803 C721∿ C724 C719 C705 C707 C701 C711 C432 C431 C727 C726 C427∿ C430 C424 C423 C808 C807 C401∿ C416 C4
	CN03 CN04 CN05 C720 C713 CS04 CS06 C725 CS05 CS03 C710 C712 C709 CS01 CS02 C702 C708 C706 C714
Q – D – V	Q801 QN09∿ QN13 QN15 DN01 D801 Q703 Q705 Q701 QN03∿ QN06 Q704 Q702 Q706 Q809 Q808 Q401
L – S – F – X	L001 F001 SS01–5 L701 L702 SS01–4 SS01–3 SS01–2 SS01–1

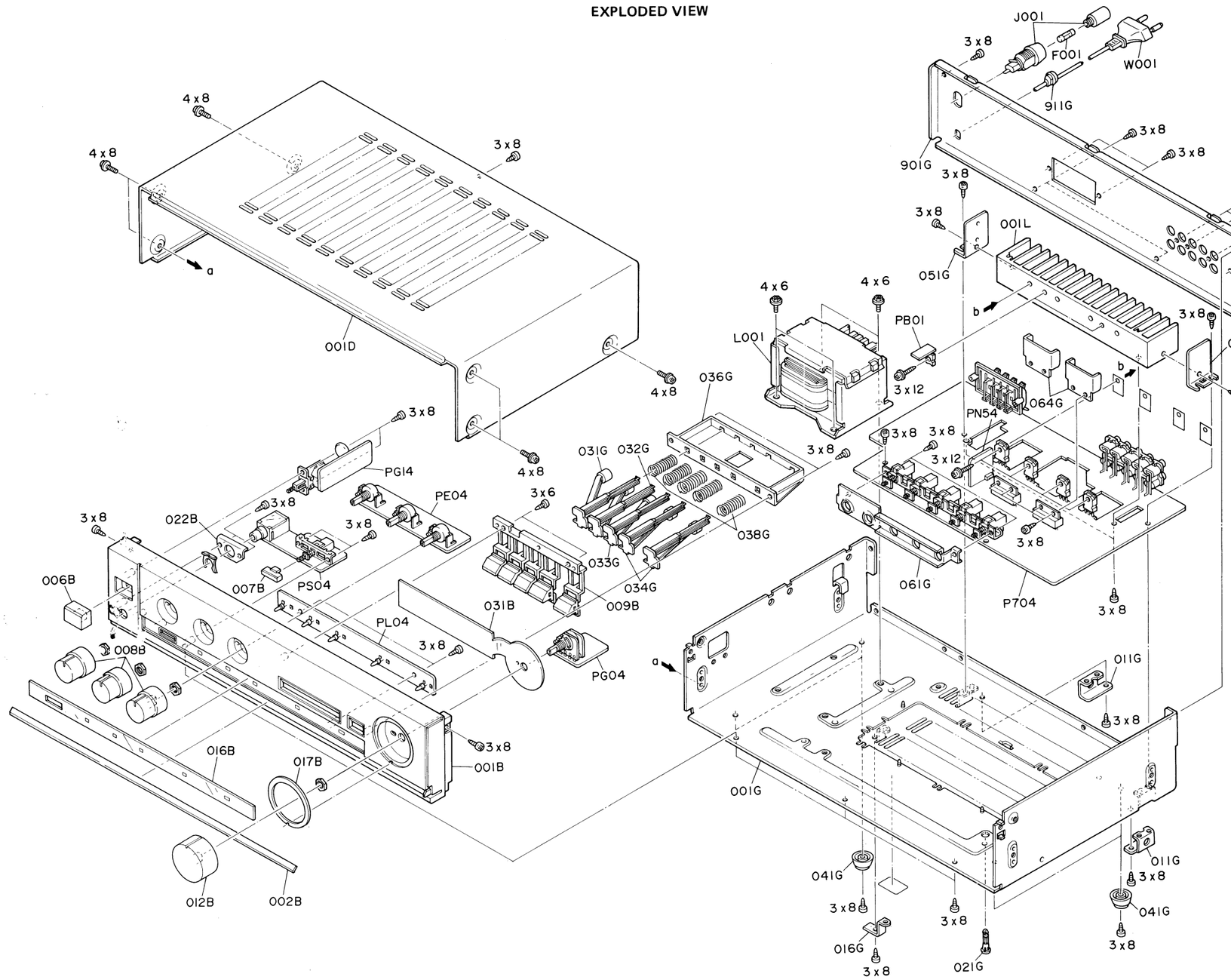




WIRING DIAGRAM

| | | |

EXPLODED VIEW



F001	4822 253 20017
J001	4822 256 30233
J031	4822 267 40505
L001	4822 146 21178
001B,002B, 016B,017B	4822 426 51092
002B	4822 426 51041
006B	4822 410 25074
007B	4822 410 25075
008B	4822 412 20974
009B	4822 410 25228
012B	4822 412 20663
016B	4822 454 11859
017B	4822 454 11832
006D	4822 502 12501
006G	4822 500 10357
031G	4822 404 60254
032G	4822 404 60249
033G	4822 404 60251
034G	4822 404 60252
038G	4822 492 42018
041G	4822 462 40971
911G	4822 532 51314

List of electrical parts

C719	Cer. cap.	2 pF 50 V	4822 122 40298
C720	Cer. cap.	2 pF 50 V	4822 122 40298
C801	Cer. cap.	0.01 µF 500 V	4822 122 30043
C805	Elect. cap.	4700 µF 45 V	4822 124 21597
C806	Elect. cap.	4700 µF 45 V	4822 124 21597
G001	Cer. cap.	0.01 µF 250 V	4822 122 40305

RB02	Trimm. res.	2k	4822 100 20191
RE15	Var. res.	tone 100k	4822 100 20536
RE16	Var. res.	tone 100k	4822 100 20536
RE52	Var. res.	Bal. 200k	4822 100 20534
RG01	Var. res.	100k	4822 100 20535
RN12	Fuse res.	10E ¼ W	4822 116 60314
RN20	Fuse res.	10E ¼ W	4822 116 60314
RW01	Safety res.	330E 1 W	4822 111 50474
RW02	Safety res.	330E 1 W	4822 111 50474
R709	Fuse res.	10E ¼ W	4822 116 60314
R710	Fuse res.	10E ¼ W	4822 116 60314
R723	Res compo.	0.1E	4822 111 90966
R724	Res compo.	0.1E	4822 111 90966
R727	Safety res.	10E 2 W	4822 111 90726
R728	Safety res.	10E 2 W	4822 111 90726
R729	Fuse res.	10E ¼ W	4822 116 60314
R803	Safety res.	1k ¼ W	4822 116 60331
R804	Safety res.	1k ¼ W	4822 116 60331
R805	Safety res.	1.5k 2 W	4822 116 60339
R806	Fuse res.	10E ¼ W	4822 116 60314

2SC3419Y	4822 130 60117
2SC2785 J, H	5322 130 42052
2SA933SP Q	4822 130 42482
2SB686 R,O	4822 130 42485
2SC2785 J,H	5322 130 42052
2SD716 R,O	4822 130 42487

MPC1270H
NJM4558DD

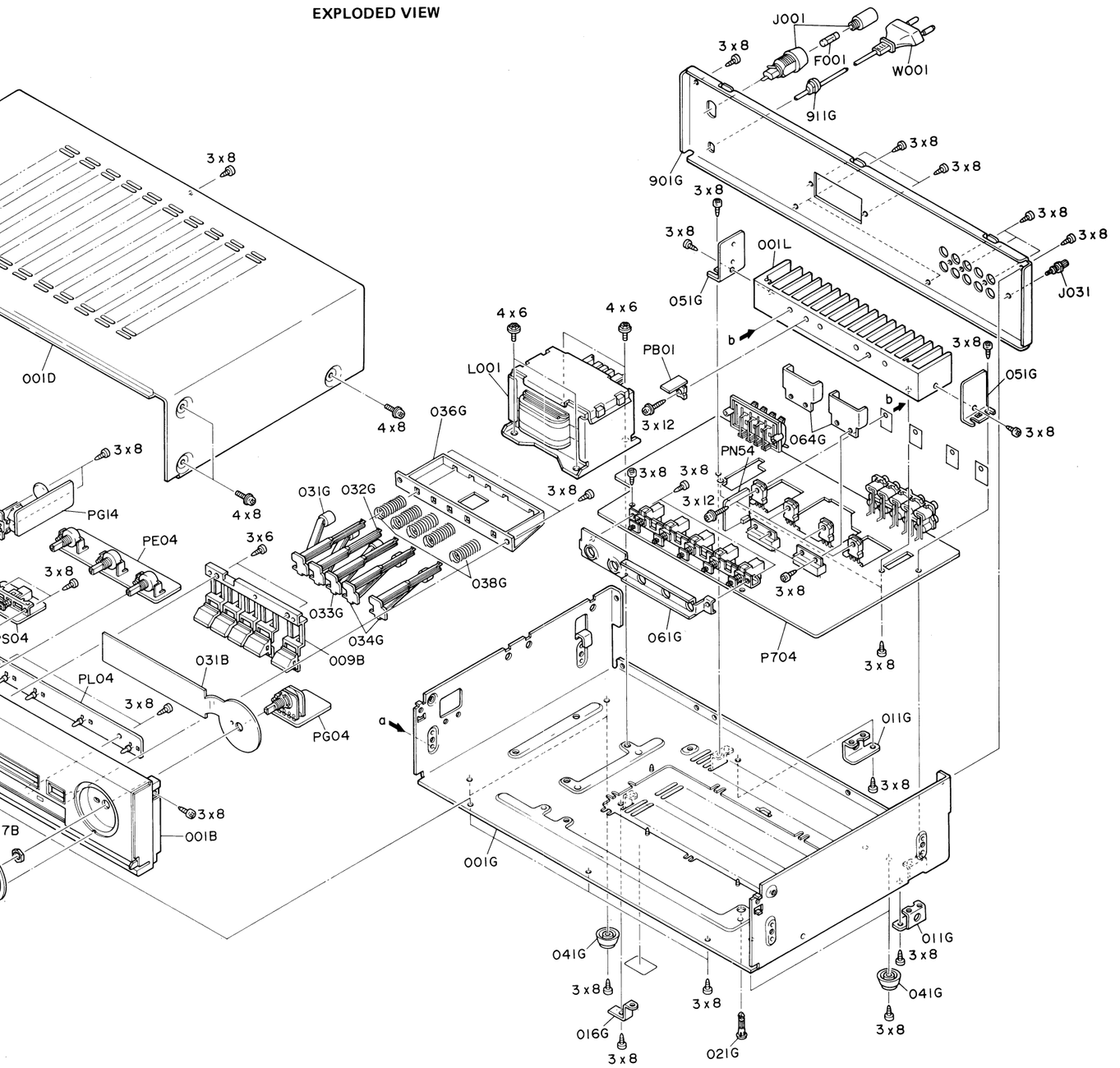
1S1555
MA1150M ½ W
S4VB-20
1SR35-200A
1S1555
GL5HD10 red

L701 Coil
L702 Coil

Miscellaneous

JS01 Hea
JS06 Terr
JS07 Terr
SS01 Pusl
SW01 Pusl
F001 Fuse
J001 Fuse
J031 Grou
J704 Spea
L001 Tran
S001 Pusl

EXPLODED VIEW



4822 253 20017	012B	4822 412 20663	
4822 256 30233	016B	4822 454 11859	
4822 267 40505	017B	4822 454 11832	
4822 146 21178	006D	4822 502 12501	
4822 426 51092	006G	4822 500 10357	
	031G	4822 404 60254	
4822 426 51041	032G	4822 404 60249	
4822 410 25074	033G	4822 404 60251	
4822 410 25075	034G	4822 404 60252	
4822 412 20974	038G	4822 492 42018	
4822 410 25228	041G	4822 462 40971	
	911G	4822 532 51314	

List of electrical parts

C719	Cer. cap.	2 pF 50 V	4822 122 40298
C720	Cer. cap.	2 pF 50 V	4822 122 40298
C801	Cer. cap.	0.01 µF 500 V	4822 122 30043
C805	Elect. cap.	4700 µF 45 V	4822 124 21597
C806	Elect. cap.	4700 µF 45 V	4822 124 21597
G001	Cer. cap.	0.01 µF 250 V	4822 122 40305

RB02	Trimm. res.	2k	4822 100 20191
RE15	Var. res.	tone 100k	4822 100 20536
RE16	Var. res.	tone 100k	4822 100 20536
RE52	Var. res.	Bal. 200k	4822 100 20534
RG01	Var. res.	100k	4822 100 20535
RN12	Fuse res.	10E ¼ W	4822 116 60314
RN20	Fuse res.	10E ¼ W	4822 116 60314
RW01	Safety res.	330E 1 W	4822 111 50474
RW02	Safety res.	330E 1 W	4822 111 50474
R709	Fuse res.	10E ¼ W	4822 116 60314
R710	Fuse res.	10E ¼ W	4822 116 60314
R723	Res compo.	0.1E	4822 111 90966
R724	Res compo.	0.1E	4822 111 90966
R727	Safety res.	10E 2 W	4822 111 90726
R728	Safety res.	10E 2 W	4822 111 90726
R729	Fuse res.	10E ¼ W	4822 116 60314
R803	Safety res.	1k ¼ W	4822 116 60331
R804	Safety res.	1k ¼ W	4822 116 60331
R805	Safety res.	1.5k 2 W	4822 116 60339
R806	Fuse res.	10E ¼ W	4822 116 60314

2SC3419Y	4822 130 60117
2SC2785 J, H	5322 130 42052
2SA933SP Q	4822 130 42482
2SB686 R,O	4822 130 42485
2SC2785 J,H	5322 130 42052
2SD716 R,O	4822 130 42487

MPC1270H	4822 209 82496
NJM4558DD	4822 209 83631

1S1555	4822 130 31018
MA1150M ½ W	4822 130 32654
S4VB-20	4822 130 32174
1SR35-200A	4822 130 32816
1S1555	4822 130 31018
GL5HD10 red	4822 130 33171

L701	Coil 1 µH		4822 157 51739
L702	Coil 1 µH		4822 157 51739

Miscellaneous

JS01	Headphone jack	4822 267 30615
JS06	Terminal 4p	4822 267 30493
JS07	Terminal 6p	4822 265 30398
SS01	Push switch	4822 276 50314
SW01	Push switch speaker	4822 276 11942
F001	Fuse T 800 mA	4822 253 20017
J001	Fuse holder	4822 256 30233
J031	Ground terminal	4822 267 40505
J704	Speaker terminal 8p	4822 267 50424
L001	Transformer	4822 146 21178
S001	Push switch power	4822 276 11891